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TITLE: Collaborative Research and Support of Fitzsimmons Army Medical Center Defense Women's Health Research Program Projects

SUBTITLE: Evaluation of a Structured Physical Fitness Program for Pregnant Soldiers: Effects on Weight Gain, Blood Pressure, Lost Duty Time, Length of Labor, Infant Birth Weight, and Score on the First Postpartum Army Physical Fitness Test (Protocol 7)

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<b>13. ABSTRACT (Maximum 200)</b>  The final phase of study was to collate the data from the three sites to compare and analyze each of the six variables. The total number of participants enrolled reached 106 of the 150 anticipated. Many of the participants from the control group never turned in data and several Motherwell program participants stopped attending class after one or two months. After plotting the data available 15 participants in each group had sufficient information to be included in the analysis. Results showed the length of labor for the Motherwell group was 5.78 hours verses 9.2 hours for the control group. On an average the control groups babies weighed more than the Motherwell groups. The diagnostic physical training test taken six weeks postpartum showed the average score for the control group to be 158 points and the Motherwell group scored an average of 155 points. The variance was not very large. Overall the results do support that exercise is beneficial during pregnancy.				
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Elizabeth W. Mansueti Sep 26, 1996  
PI Signature Date

## Table of Contents

Foreword.....	1
Table of Contents.....	2
Introduction and Background.....	3
Objectives to be Met.....	3
Results.....	3
Conclusions.....	4
References.....	5

## **I. Introduction and Background**

Current policy for pregnant soldiers does not require them to meet any physical fitness standards or participate in any structured physical fitness program during their pregnancy. This policy may be detrimental to the military readiness of these active duty women. With the rightsizing of the military, individual readiness issues are paramount. In today's smaller military force, there is no room for soldiers who are not physically fit. Research has documented the numerous benefits of regular exercise. The purpose of this study was to evaluate the benefits of a structured exercise program for pregnant soldiers. One hundred fifty pregnant women were randomly assigned into two groups. Women in the first group participated in a structured exercise program designed for pregnant women, the Motherwell Maternity Health and Fitness Program. This group met for one hour, three times each week, and their exercise routine was monitored by an instructor trained in the Motherwell Health and Fitness Program.

## **II. Objectives to be met**

Objectives of this study are to determine whether pregnant soldiers participating in a structured exercise program will have less weight gain, less change in blood pressure, shorter length of labor, higher birth weight babies, less lost duty time, and a higher score on the first post-partum APFT than do pregnant soldiers who do not participate in a structured program. The long term objective is the development of military policy for physical training for pregnant soldiers, contributing to healthier soldiers, healthier babies, and improved military readiness.

## **III. Results**

Analysis of the data was based on fourteen participants in the control group and ten in the Motherwell group. The amount of lost duty time was negligible in both groups. The weight gain was compared at the twenty five readings and showed the average weight gain for the Motherwell group was twenty-two pounds and for the control group twenty point six pounds. As anticipated, the length of labor for the

Motherwell group was shorter at 5.78 hours verses 9.2 hours for the control group. The higher birth weights for the babies were in the control group with an average birth weight of 7.68 pounds. The average weight for the Motherwell babies was 7.19 pounds. As stated earlier, the physical training test was to be measured as the first for record test. Since the regulation was changed to give the women up to 180 days post delivery to take the test, the six week diagnostic test was used for comparisons. The average score for the control group was 158 points and the average score for the Motherwell group was 155 points. The overall average of blood pressure changes varied by four to six point increase in both groups.

#### IV. Conclusions

The study was well designed to be instituted at several locations. The major problem of data collection was due to the length of the study. Although the participants willingly signed up, there was no real incentive to keep them in the study. Most of the participants who dropped out stated they did not like the idea of having to keep so much information. The transient nature of the military may have impacted on the follow through. Several teleconferences were held to ensure communication lines remained open and problems could be shared and discussed with all instructors immediately. The initial goal of showing the benefits of exercise can be seen especially in the shorter length of labor and absence of lost duty time due to pregnancy. I would like to see the study replicated to get more complete data in larger numbers and have a better follow through on the first "for record" physical training test post delivery.

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